LISTING OF THE CLAIMS

Claims 1-17 are pending in the instant application. Claims 2-12 and 14-17 have been amended. New claims 18-23 have been added. The Applicant requests reconsideration of the claims in view of the following amendments reflected in the listing of claims.

1. (Original) A method for measuring IQ path mismatch in transceivers, the method comprising:

estimating a transmitter IQ mismatch in a form of gain and phase response for transmitter I and Q paths sharing a receiver path; and

estimating a receiver IQ mismatch in a form of gain and phase response for receiver I and Q paths sharing a signal source.

2. (Currently Amended) The method of claim 1, wherein the estimating of a transmitter IQ mismatch and the estimating of a receiver IQ mismatch ~~further~~ comprises measuring a difference in the gain and phase response between the transmitter I and Q paths and between the receiver I and Q paths.

3. (Currently Amended) The method of claim 2, wherein the measuring ~~further~~ comprises sending a tone signal and measuring a power and phase shift for all of desired frequency points.

4. (Currently Amended) The method of claim 3, wherein the measuring ~~further~~

comprises sending uniformly spaced multi-tone white signals, taking a fast Fourier transform (FFT) of a unit period of the uniformly spaced multi-tone white signals, and calculating the response from a power and phase of each tone.

5. (Currently Amended) The method of claim 2, ~~further~~ comprising compensating for the difference of the transmitter and receiver I and Q paths using a digital FIR filter.

6. (Currently Amended) The method of claim 5, ~~further~~ comprising utilizing iterative estimation for filter tap parameters during the compensating.

7. (Currently Amended) A system for estimation of IQ path mismatch during signal modulation, the system comprising

a transceiver, the transceiver ~~including~~ comprising a transmitter and a receiver; and

a processor coupled to the transceiver, the processor identifying a transmitter IQ mismatch in a form of gain and phase response for transmitter I and Q paths sharing a receiver path, and identifying a receiver IQ mismatch in a form of gain and phase response for receiver I and Q paths sharing a signal source.

8. (Currently Amended) The system of claim 7, wherein the processor identifies a transmitter IQ mismatch and identifies a receiver IQ mismatch by measuring a difference in the gain and phase response between the transmitter I and Q paths and between the receiver I and Q paths.

9. (Currently Amended) The system of claim 8, wherein the processor sends a tone signal and measures a power and phase shift for all of desired frequency points.

10. (Currently Amended) The system of claim 9, wherein the processor sends uniformly spaced multi-tone white signals, taking a fast Fourier transform (FFT) of a unit period of the uniformly spaced multi-tone white signals, and calculating the response from a power and phase of each tone.

11. (Currently Amended) The system of claim 8, ~~further~~ comprising a digital FIR filter coupled to the transmitter and receiver paths that compensates for the difference of the transmitter and receiver I and Q paths.

12. (Currently Amended) The system of claim 11, wherein the processor utilizes iterative estimation for filter tap parameters during the compensating.

13. (Original) A method for estimating IQ path mismatch in a transceiver, the method comprising:

measuring a difference in the gain and phase response between transmitter I and Q paths and between receiver I and Q paths of a transceiver, the transmitter I and Q paths sharing a receiver path and the receiver I and Q paths sharing a signal source; and

compensating for the difference of the transmitter and receiver I and Q paths using a digital FIR filter.

14. (Currently Amended) The method of claim 13, wherein the measuring ~~further~~ comprises sending a tone signal and measuring a power and phase shift for all of desired frequency points.

15. (Currently Amended) The method of claim 14, wherein the measuring ~~further~~ comprises sending uniformly spaced multi-tone white signals, taking a fast Fourier transform (FFT) of a unit period of the uniformly spaced multi-tone white signals, and calculating the response from a power and phase of each tone.

16. (Currently Amended) The method of claim 15, wherein the compensating ~~further~~ comprises utilizing iterative estimation for filter tap parameters.

17.(Currently Amended) The method of claim 16, ~~further~~ comprising performing the measuring and compensating for spectrum efficient modulation.

18. (New) A system for estimation of IQ path mismatch during signal modulation, the system comprising

a processor operatively coupled to a transceiver comprising a transmitter and a receiver, the processor identifying a transmitter IQ mismatch in a form of gain and phase response for transmitter I and Q paths sharing a receiver path, and identifying a receiver IQ mismatch in a form of gain and phase response for receiver I and Q paths sharing a signal source.

19. (New) The system of claim 18, wherein the processor identifies a transmitter IQ mismatch and identifies a receiver IQ mismatch by measuring a difference in

the gain and phase response between the transmitter I and Q paths and between the receiver I and Q paths.

20. (New) The system of claim 19, wherein the processor sends a tone signal and measures a power and phase shift for all of desired frequency points.

21. (New) The system of claim 20, wherein the processor sends uniformly spaced multi-tone white signals, taking a fast Fourier transform (FFT) of a unit period of the uniformly spaced multi-tone white signals, and calculating the response from a power and phase of each tone.

22. (New) The system of claim 19, comprising a digital FIR filter coupled to the transmitter and receiver paths that compensates for the difference of the transmitter and receiver I and Q paths.

23. (New) The system of claim 22, wherein the processor utilizes iterative estimation for filter tap parameters during the compensating.